Before the

Federal Communications Commission
Washington, D.C.

In the Matter of:	)	
	)	
Comment Sought on 2010 Review of	)	WT Docket No. 10-254
Hearing Aid Compatibility Regulations	)	

COMMENTS OF:
Hearing Loss Association of America;
Association of Late Deafened Adults;
Hands & Voices;
National Association of the Deaf;
Telecommunications for the Deaf and Hard of Hearing;
Deaf and Hard of Hearing Consumer Advocacy Network; and
Rehabilitation Engineering Research Center on Telecommunications Access

Hearing Loss Association of America ("HLAA"), Association of Late Deafened Adults (ALDA), Hands & Voices (H&V), National Association of the Deaf (NAD), Telecommunications for the Deaf and Hard of Hearing (TDI), and Deaf and Hard of Hearing Consumer Advocacy Network (DHHCAN) (collectively, "Consumer Groups") and the Rehabilitation Engineering Research Center on Telecommunications Access (RERC-TA)[1] submit these comments in response to the Federal Communications Commission's ("Commission") Public Notice in this proceeding, DA 12-1745 released November 1, 2012 ("Notice") in which there was a request for updated information and comment sought on Review of Hearing Aid Compatibility Regulations.

HLAA conducted an online survey of mobile phone use in February 2011, a summary of which we made available to the Commission in our comments to this proceeding filed February 14, 2011 (HLAA February 2011 Survey)[2]. We received 728 responses to that survey.

To provide the Commission with updated information from people with hearing loss who use or have attempted to use mobile phones, we issued a second survey between December 5 and December 19, 2012 ("HLAA December 2012 Survey"). A total of 716 responses were tallied. A summary of survey results is included as Appendix B[3]. The HLAA December 2012 Survey was focused on addressing specific questions the Commission asked in this Notice.

[1] The contents of these comments were developed with funding from the National Institute on Disability and Rehabilitation Research, U.S. Department of Education, grant number H133E090001 (RERC on Telecommunications Access). However, those contents do not necessarily represent the policy of the Department of Education, and you should not assume endorsement by the Federal Government.
[2] Appendix A: "HLAA HAC Cell Phone Survey." February 7, 2012.
[3] Appendix B. "HLAA Hearing Aid Compatible Mobile Phone Survey." December 19, 2012.

HLAA regularly receives email and phone requests for help from consumers who are searching for a mobile phone that will work well with a hearing aid. HLAA has heard from consumers who still experience interference, even with phones rated as M4/T4. HLAA has also heard reports from consumers having trouble with phones that have a tiny acoustic or magnetic "sweet spot," which makes it difficult to couple the phone to the hearing aid either in the microphone or telecoil setting. In fact, consumers tell HLAA that sometimes the phone's rating seems to have little relationship to its compatibility with their hearing aid in real life settings and everyday experiences.

Consumer Groups and the RERC-TA are concerned that the complete roll out of technologies such as LTE, which appear to have the potential to reduce hearing aid interference, will take a very long time. As a result, GSM in the 1900 MHz band could well continue to be an issue for a very long time.

HLAA December 2012 Hearing Aid Compatible Mobile Phone Survey

The HLAA December 2012 Survey revealed consumers still are faced with problems searching for, finding and using mobile devices:

1. Comments for each question in the survey included complaints about store sales staff. Consumers are still apparently getting most of the information they need from shopping in the store, which is to be expected since the Industry, the Commission and Consumer Groups have urged consumers to try a phone out before purchase. However, when consumers arrive at stores to seek information about particular models, they complain that staff does not know about HAC phones.

2. Consumers continue to voice frustration with the process of searching for a mobile phone that works with their hearing aid or cochlear implant. Some go so far as to say they have given up the search.

3. When the phone consumers are most interested in does not work with their hearing aid, they will resort to some less desirable work around (e.g., the use of the speaker phone, neckloop, ear buds or taking out their hearing aids altogether). None of these work-around solutions are ideal, because they either circumvent the best use of their hearing devices or require attaching accessories to their phone that are awkward to set up in time to receive an incoming call.

   On the positive side, we are seeing more reports of successful use of Bluetooth technology to connect the hearing aid to the cell phone through the use of an accessory. However, streaming the signal from the phone to an external device via Bluetooth and then streaming the signal from the device to the hearing aid via a proprietary audio streaming technology may be more expensive than simply including a telecoil in a hearing aid. The external device is often an expensive cost in addition to the hearing aid and the proprietary audio streaming technology may not be available in "basic," low-

cost, hearing aid models. Also, hearing aids can be worn for 5-10 years, depending on the model, which means older model hearing aids typically do not support the use of an external Bluetooth streaming device. We know of no cochlear implant that supports the use of this type of device.

4. We have seen an improvement in the availability of general hearing aid compatibility information on line from service providers and manufacturers and applaud those companies who have made an effort to increase the information on their websites. However, the listing of specific HAC models of mobile devices is an area that needs improvement. The information is often stale, including models that are no longer available and having no indication on the website when such listing of models was last updated. Also, there are more models available on line than in the store. This is a problem for consumers who need to try out a phone before purchase. In addition, we found no information on service provider websites about whether or not re-stocking fees are waived for mobile phones that are not useable by the consumer and returned during the trial period.

5. Information about M and T ratings as well as the HAC setting on the phones should be more readily available in store as well as on line. In the HLAA December 2012 Survey almost a third (32.3%) of respondents did not find the M and T ratings helpful in their search, and 43.9% did not know about the HAC setting for mobile devices. Manufacturers should also use precise language for labeling any type of HAC setting. The term "HAC mode" implies that it should be turned on when in use with a hearing device. It may be the case that the "HAC mode" is actually a mode that should be used only if you listen over the phone in "telecoil" mode and not in "microphone" mode.

In response to specific questions asked by the Commission in this Public Notice:

1. ***Do the Commission's rules continue to ensure that a full range of hearing aid compatible handsets is available to all consumers?***

   The results of the HLAA February, 2011 Survey and now the HLAA December, 2012 Survey of consumers lead the Consumer Groups and the RERC-TA to believe the Commission's deployment benchmarks do not appropriately ensure that a full range of HAC handsets are available to all consumers.

   Multiple comments from consumers who complained about the frustrating and onerous process of finding a HAC mobile phone were received in response to both HLAA surveys. The process of finding a HAC mobile phone should not be more difficult than the process is for anyone else. Having only a few handsets available means finding a HAC phone is like finding a needle in a haystack: it leads to frustration and searches that take literally years, leading consumers to give up on the search or settle for a handset that

doesn't quite work. In the HLAA February 2011 Survey, fully 78%[4] of people responding indicated they thought 100% of mobile phones should be HAC.

2. ***Do the benchmarks for inductive coupling ability remain appropriate given the increasing prevalence of telecoils in hearing aids?***

As noted in HLAA Comments filed in this proceeding February 14, 2011, there has been an increase in the number of telecoils provided in hearing aids, and all three manufacturers of cochlear implants include a telecoil in their devices. Telecoils are even more popular now with the increased installation of audio induction loops in facilities nationwide. The statistics on the use of on T-coils and Induction Loop (IL) systems, also known as hearing loops, show:

- The demand for T-coils has steeply increased: recent statistics report hearing aids being sold with T-coils has surpassed 60% and is growing.
- Hearing aid manufactures now mention T-Coils when advertising their latest hearing aids.
- Manufacturers brag that T-coils are installed in the remote controls and/or Bluetooth streamers.
- These trends are on the rise.

As further evidence of the trend towards support in the hearing industry and hearing aid compatible assistive listening, there have been articles in national trade periodicals of the hearing industry such as the Hearing Review[5], Audiology Online,[6] and on line at the site of the City University of New York, Graduate Programs, Audiology[7].

Given the wider use of telecoils in hearing aids that increase the usability of hearing aids for consumers not just for telephone use, but certainly including telephone and mobile phone use, the benchmarks for inductive coupling should be adjusted accordingly.

The HLAA December 2012 Survey also shows an increase in the number of people reporting the use of Bluetooth through a streamer or other ways to connect to the hearing aid, such as the speaker phone or hands free devices. We encourage hearing aid manufacturers and mobile device manufacturers to work together to innovate a universal, seamless direct coupling method that does not require and add the cost of external devices.

---

[4] Appendix B. "Can You Hear Me Now? HLAA HAC Cell Phone Survey February 7, 2012, #11.
[5] Looping the World, by David Myers. http://www.hearingloop.org/HearingReview-2010.pdf. February, 2010.
[6] The Hearing Loop Movement is Rapidly Accelerating. http://www.audiologyonline.com/releases/hearing-loop-movement-rapidly-accelerating-6594. May 7, 2012.
[7] A Baker's Dozen Frequently Asked Questions About Hearing Loops
http://www.gc.cuny.edu/CUNY_GC/media/CUNY-Graduate-Center/PDF/Programs/Audiology/A-Baker-s-Dozen.pdf

3. ***Are consumers adequately informed about the capabilities of the new handsets and their functionality with hearing aids and cochlear implants? In particular, are consumers informed about the functioning of handsets that have a separate menu-driven mode for operation with telecoils, and that activating this mode may affect the phone's acoustic coupling performance?***

   Many of those responding to the HLAA December 2012 Survey did not know anything about the HAC setting (43.9%). Of those who did learn about the setting, most common way of discovering it was by checking the phone's instruction manual (16.8%). Only 8.4% learned about the setting at the store.

   We believe that not enough information about the HAC setting reaches the consumer. Also, if a setting on the mobile device is for both M and T modes, it is appropriate to call it a "HAC" setting. However, if that setting is only appropriate for use with the telecoil, it should be identified as a "telecoil" setting.

Consumer Groups and the RERC-TA urge the Commission to:

- We urge the Commission to re-evaluate the benchmarks for HAC mobile devices to require an overall increase in the number of available HAC phones, both for acoustic and inductive coupling. When more HAC mobile phones are available, consumers will have a better chance of finding a mobile device in their price range without the frustration of the current search or the need to purchase at additional cost some kind of work around, which is inferior to a phone that simply connects well with the hearing aid or cochlear implant. At a minimum, we urge the Commission to increase the benchmarks for mobile devices that have telecoil ratings, so that every phone that has an 'M' rating also has a 'T' rating.

- Considering most consumers continue to get their information about HAC phones from a visit to a retail store, we also urge the Commission require service providers to make the following available at the site of sale:
  - Staff who have received training in HAC phones and hearing aid compatibility, including: the meaning of the M and T ratings; where to find the HAC fact sheets, lists of phones and the HAC mobile phones for testing; and when needed, how to and whether to activate any HAC or telecoil mode built into the phones;
  - Hard copy of fact sheets or brochures about hearing aid compatibility and HAC mobile phones;
  - Hard copy list of currently available HAC mobile phone models available for sale by the service provider, which is updated regularly and dated;
  - All the service providers' HAC mobile phones currently available for sale activated and ready for testing;
  - Display cards that include the M and T ratings for each mobile phone; and
  - Physically placing HAC mobile phones together in the store.

- We urge the Commission to encourage mobile device manufacturers and service providers to work together with hearing device manufacturers and consumer stakeholders to ensure consumers get the kind of HAC phones that will work for them, without the additional burden of external devices that are inferior to direct coupling methods. We were impressed with the work of the ATIS Incubator Solutions Program #4 on HAC phones and believe a similar working group focused on issues related to hearing aid compatibility and innovation in connectivity between mobile devices and hearing aids and cochlear implants would help ensure greater access to phones by consumers. We would urge continuation of that process to meet the challenges of new technologies as they arise, as well as come to solutions for accessibility problems consumers continue to report.

- We urge the Commission to require manufacturers and service providers to continue to improve their websites to make information about HAC mobile phones more easily and readily available to consumers by:
    - using search terms about HAC mobile phones that are consistent across the industry, not just on a given website, to facilitate consumers ability to find information;
    - grouping all HAC mobile phones together in a way that makes them easily comparable;
    - regularly updating and posting the date of new updates to HAC information on their websites;
    - creating industry-wide best practices and guidelines for websites.

- We urge the Commission to consider the benefits that hearing device wearers may derive through the cross–migration of improvements in performance between wireless and wireline handsets, based on the creation or updating of standards in the two industries. For example, the Telecommunications Industry Association (TIA) has met with the Commission regarding a new acoustic amplification metric called "conversational gain." We suggest that the same potential benefits of this new metric could be applied to mobile devices. Likewise, a new TIA standard for measurement of amplified telephones (i.e. phones that have the ability to amplify output significantly for people with hearing loss) has adopted a new acoustic test and utilizes the conversational gain metric. That test accounts for the fact that people with hearing loss who use a hearing device typically cannot hold the phone's handset next to the microphone of their device in the same way a person without hearing loss can hold a handset to their ear. This test is simple to implement and closely replicates the handset holding style employed by users of hearing devices. We suggest the same type of acoustic test could be used for mobile devices.

  The goal of the first HAC technical standard was to ensure that a known magnetic field intensity emanates from a telephone handset. In doing so, hearing aid manufacturers could then design their product to take advantage of this standard magnetic field. The same goal may be achievable for acoustic coupling with the application of the

"conversational gain" metric and a test procedure that simulates the handset use condition of a hearing device wearer.

- We urge the Commission to ensure that the magnetic signal testing on phones keeps pace with changes in acoustics signal testing of the phone. In particular, as wide band audio becomes available and performance standards are developed, we need to ensure that the performance of the magnetic signal is also considered so that it will also be wide band.

- In Comments filed with the Commission October 25, 2010[8], Consumer Groups and the RERC-TA supported the proposed amendment to the rules to allow operations over the GSM air interface in the 1900 MHz band via a reduction in power of up to 2.5 dB to meet the criteria for an M3 rating after such a power reduction. We continue to support the Commission's proposal to extend this *de minimus* technical exception to all manufacturers and service providers.

  However, the most recent revision of the ANSI standard C63.19 adopted by the Commission makes it approximately 2.2 dB easier for a GSM phone to achieve an M3 rating. Manufacturers are able to choose whether to use the C63.19-2007 or the C63.19-2011 standard for testing.

  Given this situation, we can only support the use of a power reduction by any manufacturer or service provider when compliance testing is accomplished using C63.19-2007, not when compliance testing uses C63.19-2011. Handsets implementing a power reduction to meet the M3 rating when tested according to C63.19-2007 would have to be capable of operating at full power if needed when calling 9-1-1.

Finally, Consumer Groups and the RERC-TA agree with and support the basic principles for accessible telecommunications as outline in comments filed by the Hearing Industries Association (HIA) in this proceeding.

Thank you for this opportunity to provide comments in this matter.

Sincerely,

Brenda Battat

Brenda Battat
Executive Director
Hearing Loss Association of America
7910 Woodmont Avenue, Suite 1200
Bethesda, MD 20814

[8] Comments, Consumer Groups, WT Docket No 07-250 (filed October 25, 2010).

Brenda Estes
President
Association of Late-Deafened Adults, Inc.
8038 MacIntosh Lane, Suite #2
Rockford, IL 61107

Janet DesGeorges
Executive Director
Hands & Voices, Inc.
PO 3093
Boulder, CO 80307

Howard A. Rosenblum
Chief Executive Officer
National Association of the Deaf, Suite 820
8630 Fenton Street, Suite 820
Silver Spring, MD 20910

Claude Stout
Executive Director
Telecommunications for the Deaf and Hard of Hearing, Inc.
8630 Fenton Street, Suite 121
Silver Spring, MD 20910

Cheryl Heppner
Vice Chair
DHHCAN
3951 Pender Drive, Suite 130
Fairfax, VA 22010

Linda Kozma-Spytek, M.A., CCC-A
Research Audiologist
and
Christian Vogler, Ph.D.
Co-Principal Investigator,
RERC on Telecommunications Access,
Director, Technology Access Program
Gallaudet University
800 Florida Avenue NE, SLCC 1119
Washington, DC 20002
(202) 651-5676

Gregg C. Vanderheiden, Ph.D.,

Co-Principal Investigator,
RERC on Telecommunications Access,
Director, Trace R&D Center
University of Wisconsin-Madison
1550 Engineering Drive, 2107 ECB
Madison, WI 53706-1609
(608) 262-6966

January 22, 2012